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ABSTRACT

A major problem in mainstreaming and implementation of Public Law 94-142 has been in establishing evaluation criteria to determine appropriate learning environment placement. Providing appropriate education in the least restrictive environment is primarily the classroom teacher's responsibility, requiring decision-making based on these questions: (1) What am I doing?, (2) Why am I doing it?, and (3) How do I know what I am doing is effective? To guide this decision-making, the 6-S paradigm was developed as a model for representing an instructional system, permitting teachers to reduce instructional systems complexities and develop programmatic solutions. The paradigm's components include (1) Someone--the classroom manager; (2) Something--the content of instruction; (3) Somebody--the student; (4) Somehow--the strategies and tactics for guiding learning; (5) Somewhere--the learning environment; and (6) Sometime--time-relevant factors including scheduling, pacing, and readiness. Using the paradigm as a framework, teachers can generate questions affecting program implementation and development decisions. A major problem in answering these questions is student and delivery-system variability. A teacher-directed rather than a teacher-related research model approach to answering 6-S questions is needed. (LMM)

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Evaluation Parameters for a Special Education Instructional System: The Six-S Paradigm

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Evaluation Parameters for a Special Education Instructional System; The Six-S Paradigm

There is little doubt that two of the major elements of contemporary special education involves mainstreaming handicapped learners and implementing the mandates of Public Law 94-142. Ever since Dunn (1968) questioned the justifiability of self-contained classes for educable mentally retarded pupils, there has been an accelerating movement to avoid placing handicapped learners in self-contained classes. Although the term mainstreaming does not appear in P.L. 94-142; the term that is used is "least restrictive environment," the intent of the law is that the educational provisions offered to handicapped children should be appropriate and that they should be provided in the least restrictive environment insofar as they maximize opportunities for contact with nonhandicapped children. A major obstacle preventing schools from providing handicapped children with the least restrictive environment has been in establishing criteria by which the appropriateness of the environment may be determined. What do we mean when we speak of an appropriate placement? Do we mean appropriate insofar as if offers the mentally retarded child opportunities to interact with nonhandicapped peers? Do we mean it is appropriate insofar as it maximizes opportunities for academic achievement? For improved social behavior? Do we mean that it maximizes opportunities for the child to function normally only during his school career, or are we also concerned with enabling the child to lead an independent life as an adult? Ideally, we would like to achieve all of these objectives.

While many of the answer(s) to these questions are grounded in

political, social and economic ambiguity the task of actualizing the mandate of the federal legislation, to provide handicapped children with an appropriate education in the least restrictive environment, is primarily the "sole" responsibility of the classroom teacher. The complexity of their mission is evident when examining representative tasks that a teacher must respond to:

1. Determining the current status of the child's skills, attitudes and knowledge
2. Determining appropriate goals and objectives based on assessment
3. Deciding what is the point of departure in stating goals
4. Determining how objectives should be sequenced for instruction
5. Determining appropriate instructional procedures for reaching objectives
6. Implementing individualized programs in group situations
7. Orchestrating all information from 1-6 into daily lesson plans
8. Setting criteria and evaluating instructional program

Each of the above tasks represents decisions which must be made by the teacher. Decisions that answer the questions, what am I doing? Why am I doing it? And how do I know that what I am doing is appropriate and working? While the answers to these questions and the mastery of teacher tasks are facilitated by support personnel (e.g., speech therapist, physical therapist, psychologist, etc.) it is the teacher who must collect, analyze, synthesize, develop and implement a program that meets the unique educational needs of individual students.

To guide the teacher's decision-making the Six-S paradigm (Alter & Bepko, 1976; Alter & Goldstein, in press) was developed as a

model for representing an instructional system. For the purpose of the Six-S paradigm Banathy's (1968, p. 12) definition of systems was used. She defines systems as assemblages of parts that are designed and built into organized wholes for the attainment of specific purposes. The purpose of a system is realized through processes in which interacting components of the system engage in order to produce a predetermined output. Purpose determines the process required, and the process will imply the kinds of components that will make up the system. A system receives its purpose, its input, its resources, and its constraints from the suprasystem (society). In order to maintain itself, a system has to produce an output which satisfies the suprasystem.

The Six-S paradigm is an attempt to simplify and reduce the complexities of instructional systems into manageable proportions. The intent of the paradigm is to crystalize instructional systems thereby permitting teachers to examine, analyze and plan programmatic solutions. The paradigm is derived from Henderson's (1961) conceptualization of a triadic relationship between teacher, content of instruction, and the learner. The paradigm is an extension of Henderson's formulation and represents a more comprehensive and systematic conceptualization of the instructional process. The components of the paradigm include SOMEONE, the individual who manages the teaching-learning process in the classroom, and is most often the program implementor. Within this group are teachers, aides, parents, ward attendants, residence managers and anyone else who has direct contact with, and responsibility for, educating the student. SOMETHING, the content of instruction, represents an amalgam of the

knowledge, skills, and attitudes consistent with the goals of education. SOMEBODY is the student, as characterized by particular learning characteristics, learning style, rate of learning, motivation to learn, and the background of knowledge and experience that s/he brings to the learning situation. SOMEHOW reflects the strategies and tactics that are used to guide the learning process in ways that are consistent with the content of instruction and the student's learning characteristics. SOMEWHERE, the learning environment, encompasses any area in which instruction occurs and is defined in relation to physical, social and psychological aspects of the environment. Finally, SOMETIME incorporates all of the time-relevant dimensions of the instructional process and includes scheduling and pacing of activities as well as readiness for learning. The "Six-S Paradigm" thus organizes the instructional process into logical elements with the objective of making the resulting management of the learning process more coherent and effective. Utilizing the Six-S paradigm as a frame of reference the teacher can generate the questions that will effect their decisions regarding program development and implementation. Table 1 shows representative questions for each of the six factors.

A major obstacle in answering questions generated by the Six-S paradigm is an extreme across the board variability in students and delivery systems. This includes differences in the nature and role of teachers, ancillary personnel, parents and facilities. The existing literature, which is equivocal at best, cannot be relied upon to supply the empirical basis for decision making regarding both the development and implementation of site specific instructional programs. For a teacher to effect a "best fit" among the six factors

TABLE 1

SOMEONE	1. Who are the people who come into direct content with the child? 2. What are the responsibilities of these people for the implementation of the instructional program and do they have the competencies required for implementation? 3. What additional support personnel will be needed to implement the instructional program?
SOMETHING	1. What areas of human development are most important for this child and what programs exist in these areas? 2. Are the available programs "modifiable" to meet the unique needs of the child and the conditions under which program implementation is to occur? 3. How is the content of instruction to be organized? 4. What are the evaluation and assessment procedures for each content area or program?
SOMEBODY	1. Dimensions of educability. 2. What are the characteristics and needs of this child and how are they to be determined? 3. Which of these needs takes priority and on what basis is priority assigned?
SOMEWHERE	1. What environmental conditions effect the results of educational programming for this child? 2. What are the optimal environment(s) for program implementation and content of instruction?
SOMEHOW	1. What is the optimal strategy for communicating the content of instruction to this child? 2. What modifications in instructional methodology need to be made as a function of the characteristics of the child, implementor competencies, and environmental conditions? 3. How are the instructional strategies and methodology to be evaluated with regard to their appropriateness and effectiveness with this child?

TABLE 1 (con't)

SOMETIME	1. When should specific activities be scheduled?
	2. How long should an activity take?
	3. How should the activity be paced?

a research model needs to take the implementator of the program as the point of departure . Applying Smith's (1980) model of curriculum-directed vs. curriculum-related research the following describes the distinction between an implementor-directed approach to answering Six-S questions as opposed to an implementor-related perspective. First, the term implementor-directed deals with research questions that are inherent in or generated by the implementors of programs while the implementor related implies research questions that seek clarification of broad issues involving the behavior of a specific target populatio . Second, implementor-directed research would examine theories and findings as a function of the question, while implementor-related research would explore the question(s) as a function of a theory. Third, implementor-directed questions as opposed to implementor-related questions would be raised prior to the need for the research answer so that the problem solution can be developed, implemented, and made available as input to facilitate decision-making concerning program development, whereas implementor-related questions, may be raised quite independent of development needs. Finally, the two approaches also differ concerning the methodological procedures needed to answer the research questions. This includes questions about the subjects to be employed, the design of the study, statistical analysis, and the use to be made of the findings. For example, one issue involves the degree of similarity between the characteristics of subjects employed in a study or experiment and the target population for which the programs are intended. For example, the target population for a gross motor program could include persons designated as mentally retarded with other concomitant difficulties;

delayed motor development; their teachers, parents, physical therapist, and characteristics of the educational environment in which the programs are to be implemented. Implementor-directed research is more likely to employ samples of this target population in its work than would implementor-related efforts which are likely to go outside the network either for representatives of the target population or for comparison and contrast groups, namely "non handicapped" and other children not identified as retarded. In terms of experimental design, it would appear that implementor-directed research would focus on the naturalistic situations in which behaviors occur, while implementor-related efforts typically resort to more contrived, experimental conditions, though some overlap is reasonable.

To answer questions generated by an implementor-directed research model requires at least three primary classes of information. First, is information from the implementors of the program. This class of information provides important data regarding the effects of the program on their users. User perceptions of a program will, of course, influence the ultimate effect of the program itself on the target population of children. The second primary class of information concerns actual implementation of the programs; that is, the degree to which programs are implemented in accord with the intent and purposes of the teacher. To that end, data needs to be collected from systematic observations of teacher-student interactions during actual use of the programs and teacher self evaluations may need to be augmented by the utilization of observers who collect information on the impact of programs in their various delivery settings. The third primary class of information concerns

the effects of the programs on the target population. This includes, but is not limited to estimates of change in student behavior as a function of exposure to a program. This data is related to information concerning the biobehavioral characteristics of the children in order to provide a broad picture of the effects of a program. The three classes of information represent a balanced effort to obtain data concerning implementor evaluations, assessments of student progress, and observed crucial delirery system variables. A variety of procedures and techniques can be utilized in gathering these data. For example, descriptive data can be obtained on the child, implementor, and delivery system and setting. The various information sources provide feedback on program manageability, clarity, format, media, and the modifications and adaptations which were required in order to meet the unique characteristics of individual children. Estimates of child progress are proveded through the use of pre and post assessments, and through the continual monitoring of criteria attainment.

In summary, the Six-S paradigm was developed to not only provide the teacher with an instructional matrix for planning an educational program but to provide the teacher with a framework for generating areas of investigation that can maximize the teachers' implementation of the program. The notion of a teacher-directed research model as opposed to a teacher-related model was applied to the Six-S paradigm as a means for generating questions that are inherent and/or generated by the developer of the educational program.

REFERENCES

Alter, M. & Bepko, R. A proposal for curriculum based individualized educational planning. Curriculum Research & Development Center in Mental Retardation, New York University, 1978.

Alter, M. & Goldstein, M.T. Substantive IEP planning using a "six-s" paradigm, (in press).

Banathy, B.M. Instructional Systems. Palo Alto: Fearon Publishers, 1968.

Henderson, K.B. Uses of subject matter. In B.U. Smith & R.M. Ennis (Eds.), Language and concepts in education. Chicago: Rand McNally, 1961, pp. 43-58.

Smith, I.L. Research in large-scale curriculum development for mildly retarded children. In J. Gottlieb (Ed.), Educating Mentally Retarded Persons in the Mainstream. Baltimore: University Park Press, 1980.

Tymitz-Wolf, B. Guidelines for assessing IEP goals and objectives. Teaching Exceptional Children, 1982, 14(5).

Weiner, B.B. (Ed.). Periscope: Views of the individual education program. Reston, VA: Council for Exceptional Children, 1978.